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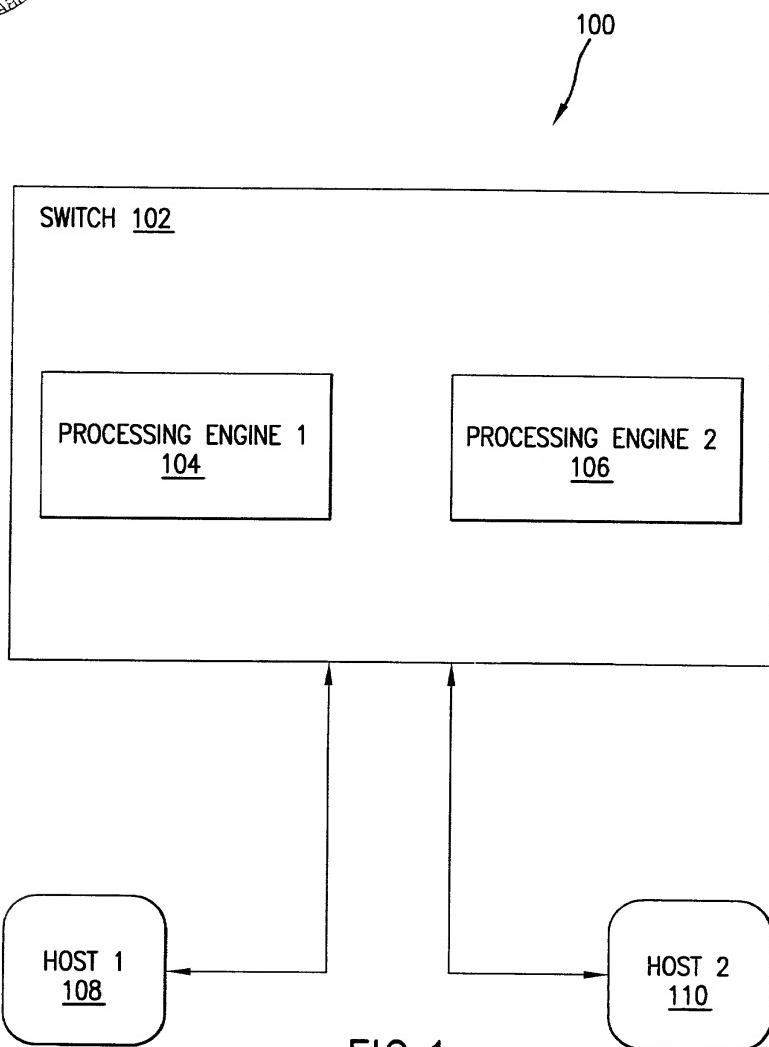


FIG.1



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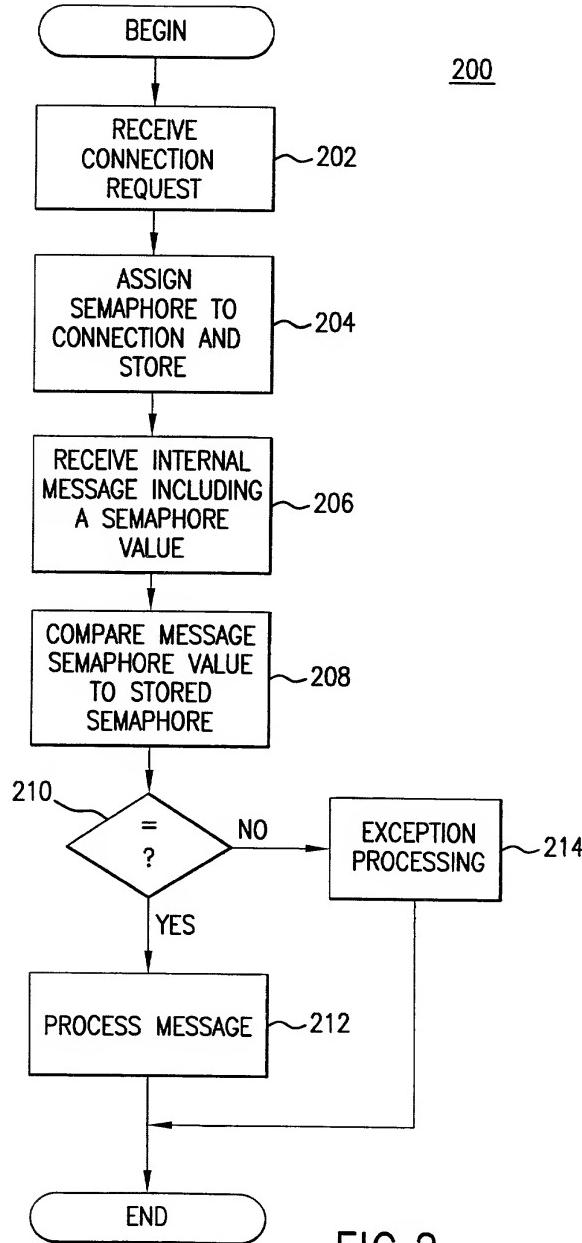


FIG.2



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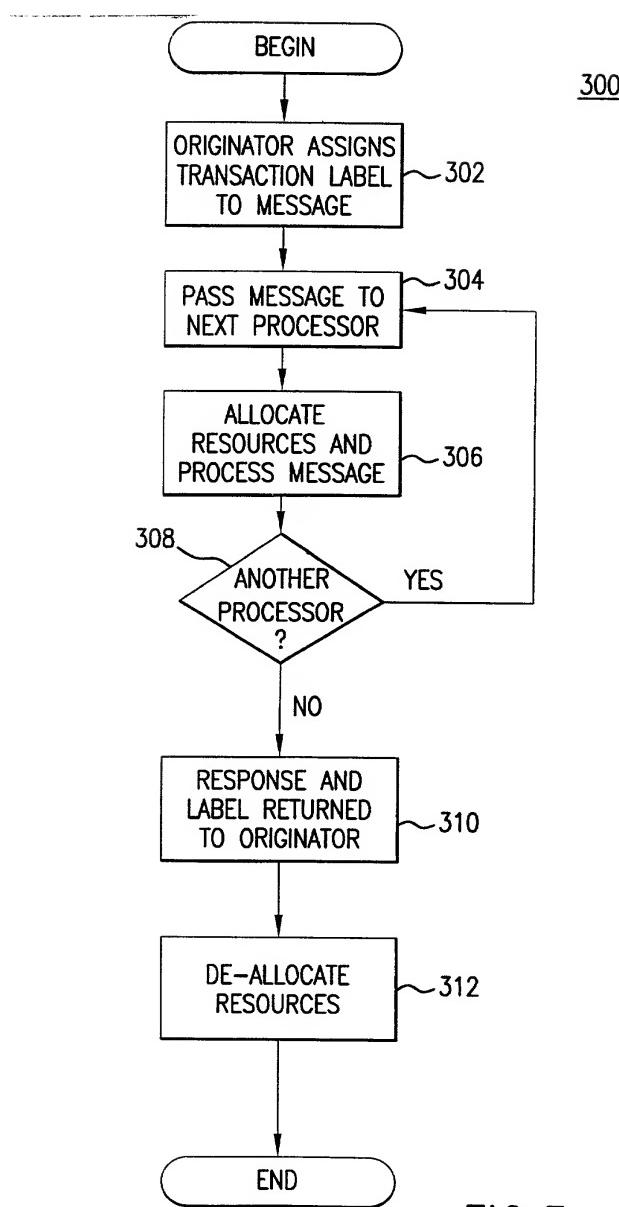
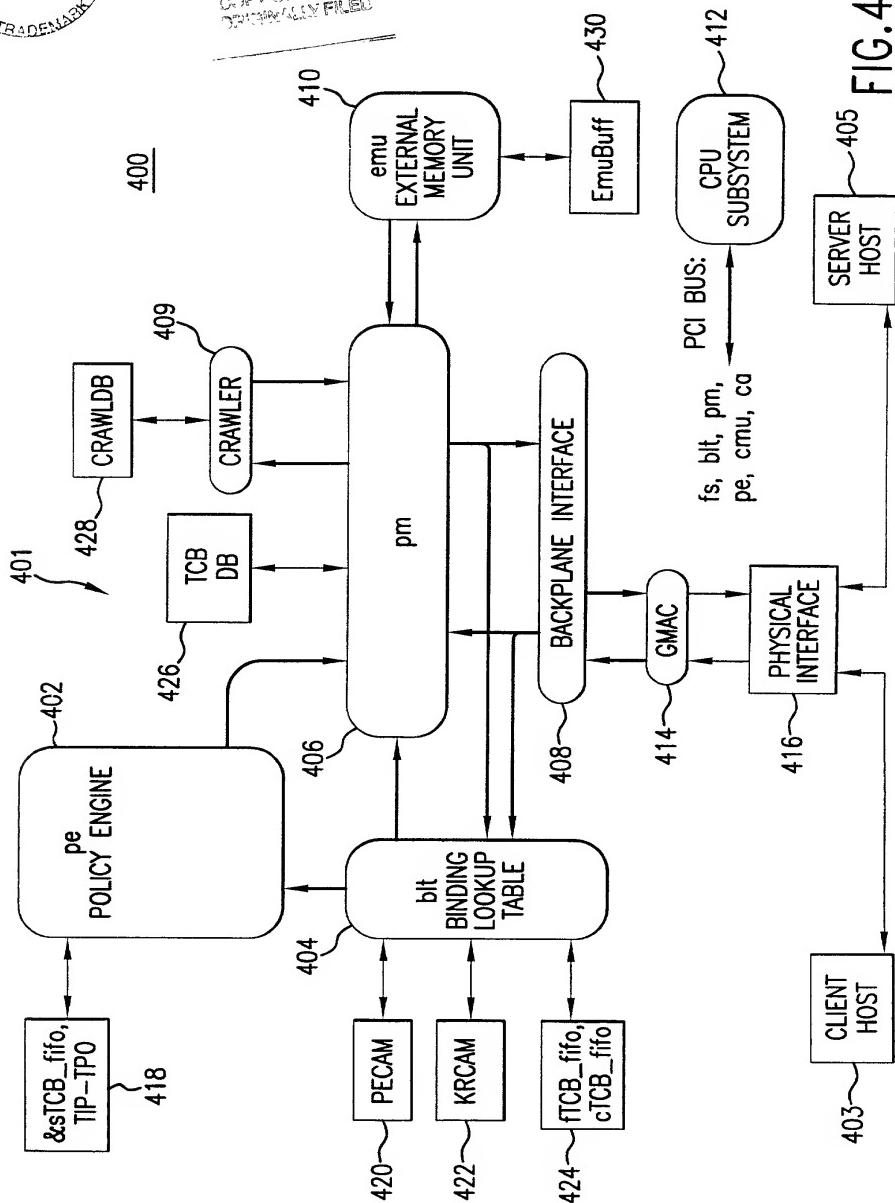
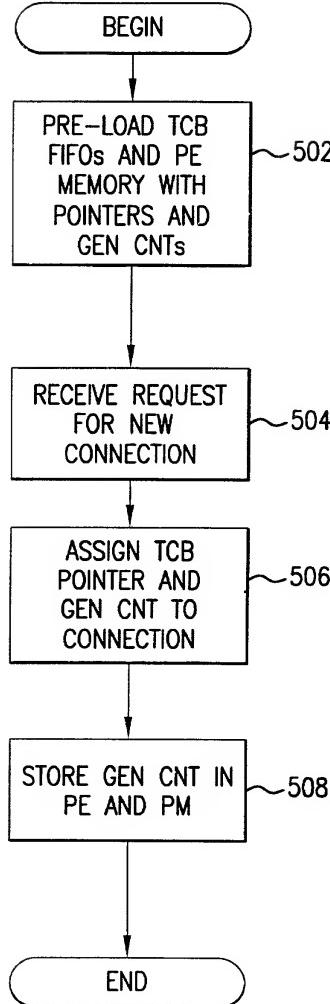


FIG.3





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FIG.5



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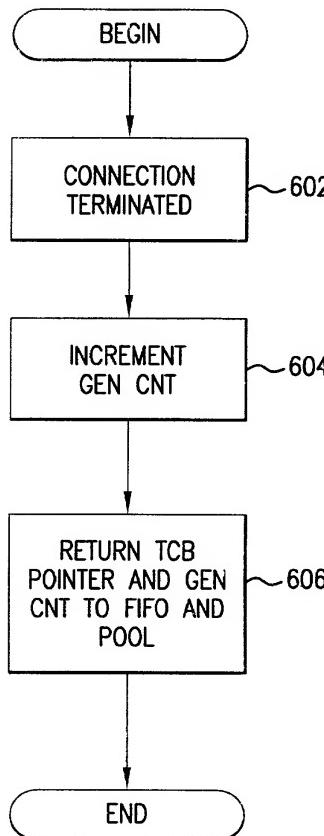
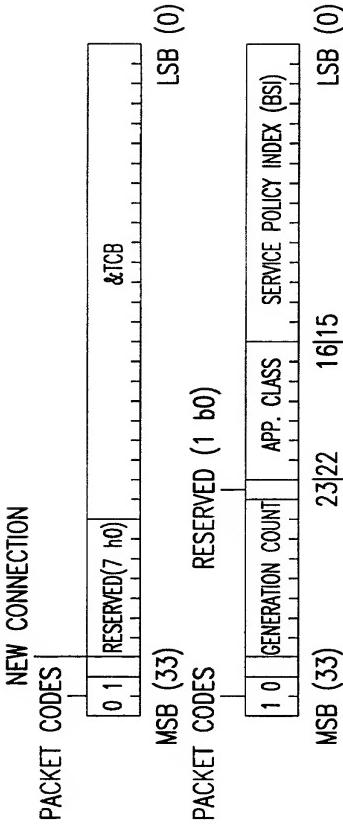


FIG.6



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### NEW CONNECTION



ELEMENT	BITS	DESCRIPTION
PACKET CODES	2	2'b11: INVALID/RESERVED (FOR TIMESTAMP, FORMAT TBD). 2'b01: START OF PACKET: {NEW, &TCB} 2'b10: END OF PACKET: {APPLICATION CLASS, SERVICE POLICY INDEX} 2'b00: INVALID/RESERVED.
NEW CONNECTION	1	LOGIC 1 INDICATES A NEWLY ESTABLISHED CONNECTION; LOGIC 0 INDICATES A "CAM HIT" ON A CURRENTLY ACTIVE CONNECTION.
RESERVED	AS NEEDED	LOGIC 0; RESERVED
&TCB	24	POINTER TO A FLOW TCB OR A CLIENT TCB OR A RST/DRP/IGN POINTER.
GENERATION COUNT	8	NUMBER OF TIMES THIS & TCB HAS BEEN RECYCLED.
APPLICATION CLASS	7	APPLICATION CLASS FIELD FROM SERVICE LOOKASIDE CAM.
SERVICE POLICY INDEX	16	SERVICE POLICY INDEX FROM SERVICE LOOKASIDE CAM (a.k.a. "BSI").

FIG. 7A



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6-BIT PACKET TAGS		6-BIT MESSAGE TAGS		64-BIT PACKET DATA				
SOM	COM	&xTCB		PROTO	Src IP ADDRESS		RESERVED	SERVER INDEX
SPM	NOP	tlabel		SERVICE POLICY	HISTORY POINTER		GENCNT	
SHM	NOP	RESERVED			HISTORY POINTER			
EOM	NOP	DEST IP ADDRESS			Src PORT #		Dest Port #	

SERVICE POLICY IS A 22-BIT QUANTITY;  
 BIT NUMBER 57 IN THE UPPER SPM RESERVED FIELD IS USED TO INDICATE THE CLIENT FLAG;  
 tlabel IS A 6-BIT TRANSACTION LABEL TO BE RETURNED TO PAKMAN UPON COMPLETION OF COM;  
 ALL OTHER DATA FIELDS ARE ALIGNED ON 8-BIT BOUNDARIES AS INDICATED BY THE | MARKS.

FIG. 7B-1



### MARKER PACKET QUEUE TAGS SUMMARY

ENCODING	BITS	DESCRIPTION
SOM	6	START OF MARKER PACKET: &TCB + PROTOCOL + Src IP ADDRESS
SPM	6	SERVICE POLICY MARKER: CLIENT FLAG + 22-BIT SERVICE POLICY + 16 BIT SERVER INDEX.
SHM	6	SERVICE HISTORY MARKER: 32-BIT RESERVED FIELD + 32-BIT HISTORY POINTER
EOM	6	END OF MARKER PACKET: DEST IP ADDRESS + Src AND DEST PORTS
COM	6	COMMAND: OPTIONS APPEAR IN TABLE 5-2 BELOW; USUALLY DELETE.
NOP	6	LOGIC 0; RESERVED; IGNORE PACKET DATA AND MESSAGE TAGS

### MARKER PACKET QUEUE COM OPTIONS SUMMARY

ENCODING	BITS	DESCRIPTION
ADD	6	ASSOCIATE THE &xTCB WITH THE 5-TUPLE KEY, AND RETURN THE TRANSACTION LABEL BACK TO PAKMAN.
DEL	6	DELETE THE ASSOCIATION OF THE 5-TUPLE KEY. (&xTCB NOT REQUIRED) RETURN THE TRANSACTION LABEL BACK TO PAKMAN.
PASS	6	SEND DELETE DATAGRAM TO PE, BUT DO NOT CHANGE STATE OF BLT CAM's.
NOP	6	LOGIC 0; RESERVED

**FIG.7B-2**



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- BLT - PE POST FORMAT FOR DELETE THE CONNECTION

33 32/31 30/29 24/23 16 0

SOP	CMD	TLABEL	&TCB	
MOP	GEN_CNT		SERVICE POLICY	
MOP			TP	
MOP		SERVICE INDEX	TP	
EOP			HISTORY Ptr	

#### POSTED WRITE DATA ELEMENT SUMMARY

ELEMENT	BITS	DESCRIPTION
CMD	2	CMD 1 SERVER DELETE CMD 2 CLIENT DELETE
TLABEL	6	LABELS FOR ADD OR DELETE
SERVICE POLICE	22	SERVICE POLICE INDEX FOR MAPPING TO SERVER IP ADDRESS
SERVER INDEX	16	ADDRESS POINTER TO LOCATE THE SERVER TABLE
TP	32	TALISMAN'S IP ADDRESS
TP	16	TALISMAN'S PORT
&TCB	24	TCB ADDRESS POINTER
TIME STAMP	32	TBD

FIG. 7C-1



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### BLT - PE POST FORMAT FOR NEW SERVICE

33	32/31	30/29	23/22	16/15	0
01	SOP	CMD	RESERVED	CLASS	SERVICE POLICY
00	MOP		SrcIP		
00	MOP	GEN_CNT		&fTCB	
10	EOP	RESERVE			SrcPORT

### - POSTED WRITE DATA ELEMENT SUMMARY

ELEMENT	BITS	DESCRIPTION
CMD	2	CMD - 0 &fTCB, NEW SERVICE
SERVICE POLICE	16	SERVICE POLICE INDEX FOR MAPPING TO SERVER IP ADDRESS
SrcIP	32	CLIENT IP ADDRESS THAT REQUEST FOR SERVICE
&fTCB	24	FLOW TCB ADDRESS POINTER
TIME STAMP	32	FOR TRACKING THE PACKET INSIDE EACH BLOCK. TBD

FIG.7C-2



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NEW PACKET  
33 32/31 39/29 24/23

0

SOP	CMD	NULL	&fTCB OR &sTCB
MOP			&cTCB
MOP			SrcIP
MOP			TIP
MOP			ServerIP
MOP	TP0		ServerPO
MOP			Sequence
MOP			MAC ADDRESS
MOP		Vlan TAG	MAC ADDRESS (HIGH TWO BYTE)
MOP		GEN_CNT	SERVER INDEX
MOP			CSI/BSI
EOP			HISTORY POINTER

FOR DELETE PACKET

33 32/31 30/29 24/23

0

SOP	CMD	TLABEL	&fTCB OR &sTCB

FIG.7D

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PM - EMU POST FORMAT

15

63 59

COMMAND	CMD	OPTIONS	TOTAL LENGTH	FIRST WORD
		OPTIONS		TRANSACTION
		TCB (128 BYTES)		
		OPTIONAL DATA (UP TO BUFFER SIZE)		

PM COMMANDS TO EMU

COMMAND NAME	COMMAND FIELD	REQUIRED FIELDS
PM RESET	'h1	BUFFER NUMBER
PM LockSN	'h2	BUFFER NUMBER, GENERATION COUNT AND SEQUENCE NUMBER
PM READ	'h3	BUFFER NUMBER AND GENERATION COUNT
PM PURGE	'h4	BUFFER NUMBER
PM POST WITH DefAck	'h5	BUFFER NUMBER, GENERATION COUNT, SEQUENCE NUMBER, TCB AND DATA
PM POST	'h6	BUFFER NUMBER, GENERATION COUNT, SEQUENCE NUMBER, TCB AND DATA
PM POST WITH LockSN	'h7	BUFFER NUMBER, GENERATION COUNT, SEQUENCE NUMBER, TCB AND DATA

FIG. 7E



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63	59	35		15
4 h1	RESERVED		BUFFER ADDRESS (20 BITS)	16 h0008

PM RESET COMMAND

63	59	43	35	15
4 h2	RESERVED	GC	BUFFER ADDRESS (20 BITS)	16 h0010
RESERVED		FULL SEQUENCE NUMBER		

PM LOCK SN COMMAND

63	59	51	35	15
4 h4	RESERVED	PURGE LENGTH	BUFFER ADDRESS (20 BITS)	16 h0008

PM PURGE COMMAND

63	59	43	35	15
4 h3	RESERVED	GC	BUFFER ADDRESS (20 BITS)	16 h0008

PM READ COMMAND

FIG.7F-1



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63	59	35	15
4 h6	SEQUENCE NUMBER [23:0]	BUFFER ADDRESS (20 BITS)	16 h0088 + DATA

RESERVED	GC	FULL SEQUENCE NUMBER	
	TCB (128 BYTES)		
	DATA (UP TO BUFFER SIZE)		

63	59	35	15
4 h5	SEQUENCE NUMBER [23:0]	BUFFER ADDRESS (20 BITS)	16 h0088 + DATA

RESERVED	GC	FULL SEQUENCE NUMBER	
	TCB (128 BYTES)		
	DATA (UP TO BUFFER SIZE)		

63	59	35	15
4 h7	SEQUENCE NUMBER [23:0]	BUFFER ADDRESS (20 BITS)	16 h0088 + DATA

RESERVED	GC	FULL SEQUENCE NUMBER	
	TCB (128 BYTES)		
	DATA (UP TO BUFFER SIZE)		

FIG. 7F-2  
PM POST WITH LOCK SN COMMAND

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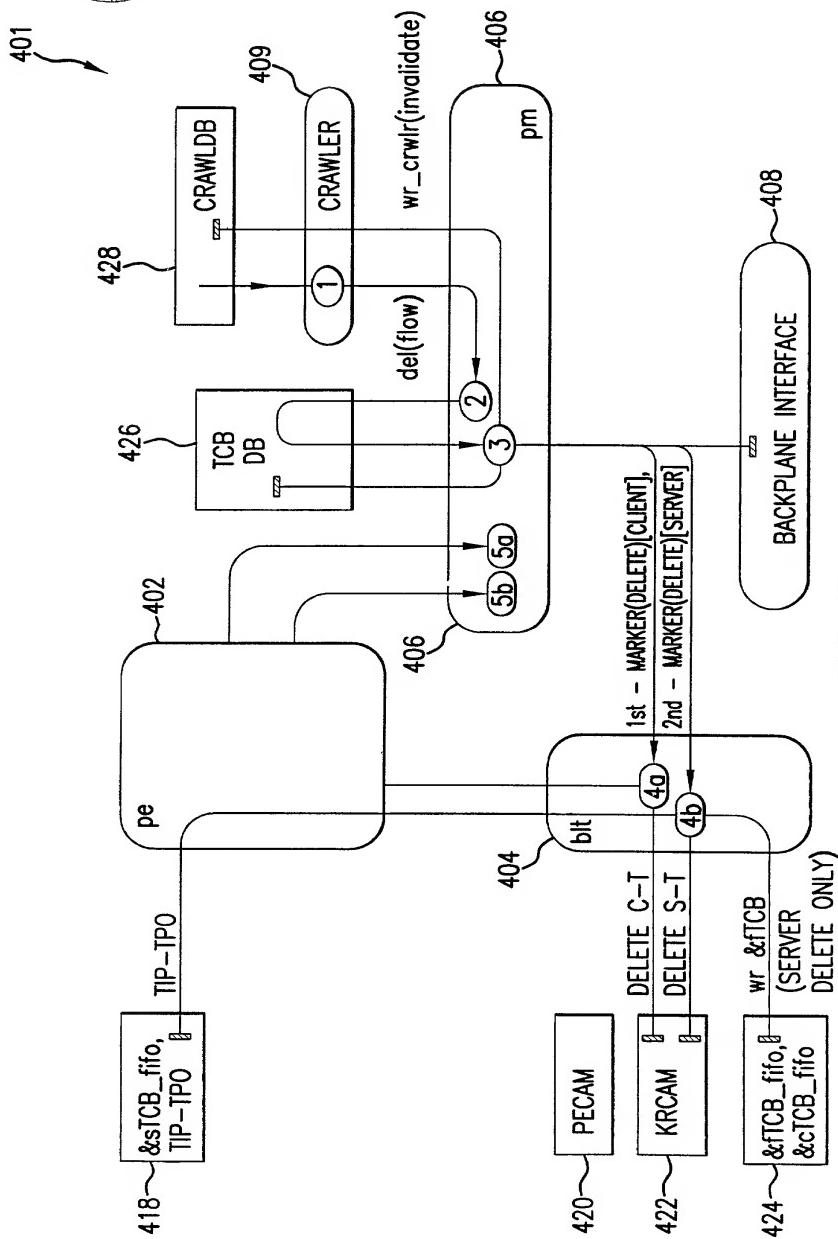


FIG. 8



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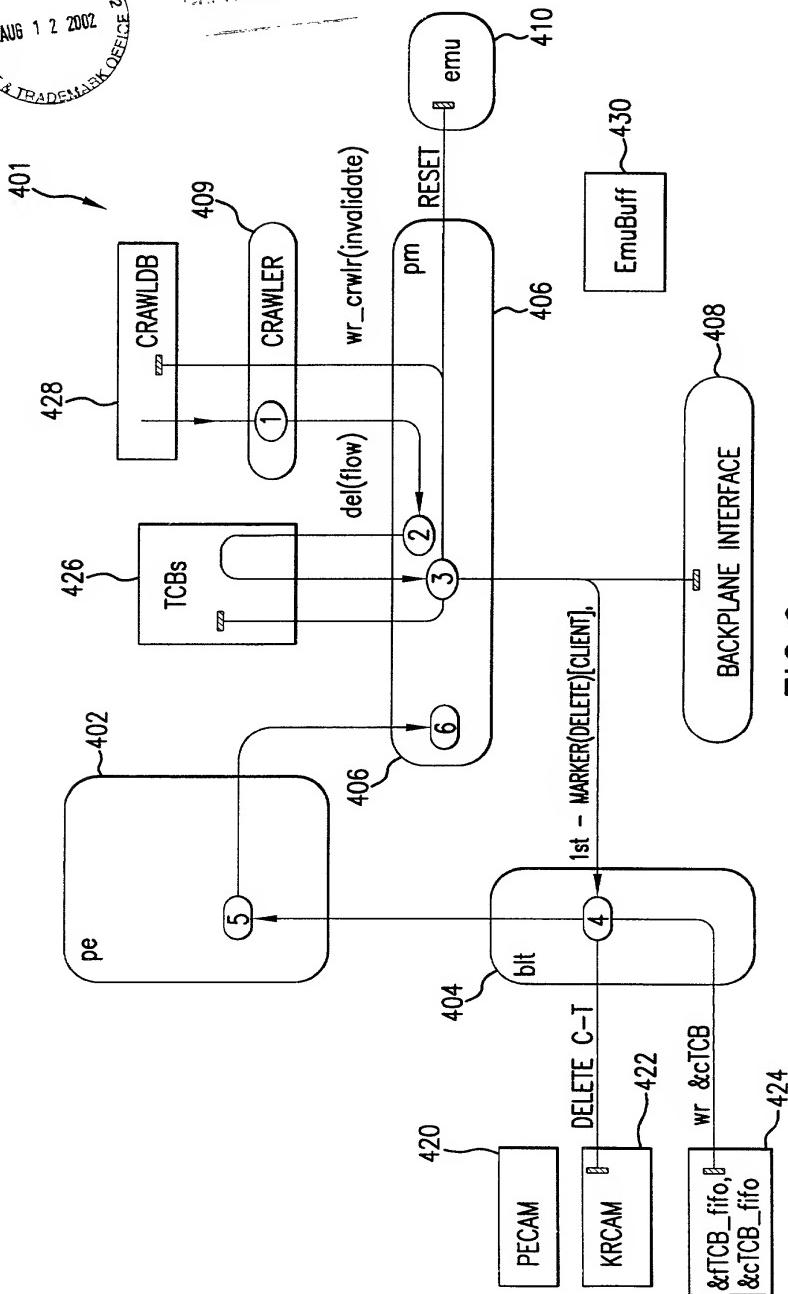


FIG. 9



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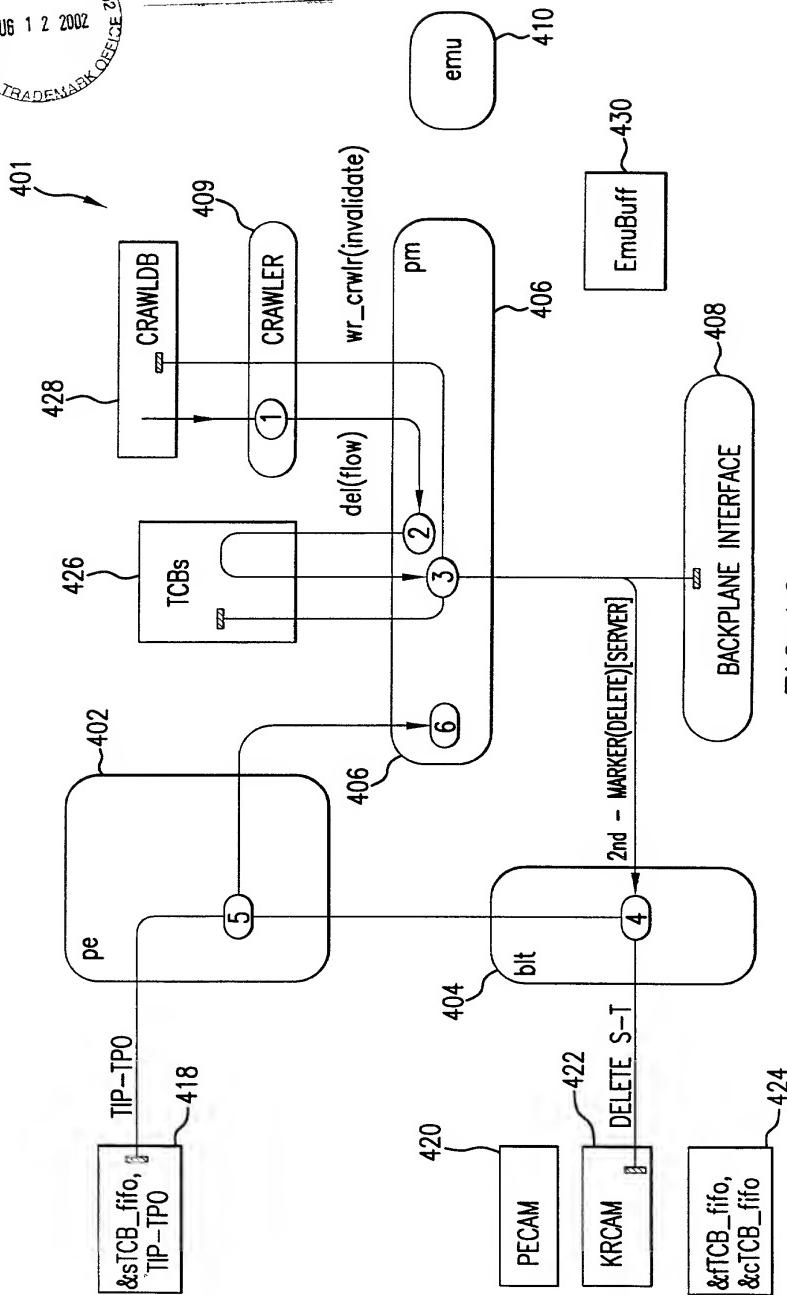


FIG. 10